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Summary

This report examines the market for architectural, construction and engineering (ACE) services in India. According to the Ministry of Industry, India requires new investments of the magnitude of USD 386 billion by 2010 to develop and improve its infrastructure. The Indian market for ACE equipment and services has been growing steadily as projects are implemented in several infrastructure industries. This trend is likely to continue as more projects are implemented. The most promising areas of growth are power, oil & gas, ports, roads, civil aviation, urban infrastructure, and housing.

India's construction industry contributes 5 percent of the nation's gross national product, and was estimated at USD 36 billion in 2005. Based on this estimate, the Indian market for ACE services was USD 810 million, and is growing approximately at 15-20 percent per year. Private sector investment in industry and housing, and government investment in India's infrastructure are the growth drivers.

Import constitutes approximately 40 percent of the Indian market for ACE equipment and services. The U.S. is a dominant supplier having a share of 25 percent, followed by the United Kingdom, Japan, Korea, Germany and France. The import market is currently valued at USD 324 million and is estimated to grow at the rate of 12 percent per year. Over the next two years, imports are likely to exceed USD 375 million per year. The U.S. share is expected to be the dominant source of supply of ACE services.

The construction industry in India has four broad segments: civil, infrastructure, housing and industrial projects. The growing construction activity in India is likely to produce increased imports for U.S. ACE equipment and services. Partnerships with foreign and U.S. firms will continue to be sought by Indian architectural, engineering, and construction firms for large-scale projects, either through joint ventures or in consortia, in an effort to obtain highly needed expertise to implement specialized contracts.

Growth of the architectural services industry is hampered by the fact that many construction projects in India are offered only on a non-convertible Rupee payment basis. Only projects financed by international development agencies permit payments in foreign currency. India is a price-sensitive market where the low bidder is frequently awarded the contract. High local content in a joint venture bid is essential to keep costs and prices down.

Market Demand

India's construction industry contributes 5 percent of the gross national product, and was estimated at USD 36 billion in 2005. Based on this estimate the Indian market for architectural, construction engineering services was estimated at USD 810 million; and is growing approximately 15-20 percent per year. Private sector investment in commercial, industrial and housing activity and government investment in India's infrastructure industries are fueling this growth.

The new investment required for India's infrastructure industries is estimated at USD 386 billion by 2010. Given this need to improve its infrastructure, the Indian market for architectural, construction and engineering services has been growing steadily. In the last year, government approvals for commercial and industrial construction have exceeded the level of approvals for the previous three years by more than 35 percent. Major works contractors in the public and private sectors are now demanding higher quality services and technologies.

India provides a market for architectural, construction and engineering services in several infrastructure sectors. The most promising of these from a growth perspective are power, oil & gas, ports, roads, civil aviation, urban infrastructure, and housing.

India's leading companies and well-run government corporations have shown a marked preference for U.S. architectural, construction and engineering services. Several projects executed by the many U.S. companies operating in this market have become showcases for plant design, transportation bridges, refineries, and industrial plants. Their level of expertise is raising the standard for project design, construction, management, and supervision.

It appears that the potential for U.S. firms lies in highly specialized contracts for designing, developing industrial infrastructure, training institutes, and construction supervision, where local firms have limited experiences. In addition, there are opportunities to supply ACE services to India's chemical, electrical/electronic, mechanical engineering and environmental sectors.

Market Data

Construction activity consists of contract construction by general builders, civil engineering contractors and special trade contractors. The industry has strong linkages with the economy, because its multiplier effect is one of the highest. Every Rupee invested in construction provides an additional benefit of Rs. 0.78 to the economy as a whole. The sector directly contributes approximately 5 percent of India's GDP.

In India, the industry can be classified into three broad segments: civil (municipal roads, sewage, and water supply projects); infrastructure (highways, railroads, dams, bridges, ports); and housing/industrial (residential and non-residential construction.)

The Tenth Five Year Plan of the Government of India estimated a shortage of 22.4 million dwelling units. Thus, in coming 15 - 20 years, 80 - 90 million housing units will have to be constructed. The investment required for constructing these and related infrastructure during this period will be \$666 billion to \$888 billion at roughly \$33 billion to \$44 billion per year. In the last few years, the real estate sector has witnessed a spurt in demand not just for residential property but also commercial property. This rise in demand is attributed to the large and growing middle class population of about 300 million people. The growth trends in the Retail, Entertainment, Information Technology and Business Process Outsourcing have corresponded to a growing demand for shopping malls, multiplexes, food outlets, office spaces, convention and business centers.

Housing and real estate industry has significant linkages with other sectors of the economy. A unit increase in expenditure in this sector has a multiplier effect and the capacity to generate income as high as five times. Contribution of housing and real estate to India 's GDP is a meager 1% against 3 - 6% of developing

countries. If the economy grows at the rate of 10%, the housing sector has the capacity to grow at 14% and generate 3.2 million new jobs over the next 10 years.

India has opened its door to Foreign Investors. Foreign Direct Investment (FDI) of up to 100% under the automatic route has been permitted in housing, built-up infrastructure and construction-development projects.

The Urban Land Ceiling Act has been repealed, freeing the supply of land in urban areas and making it available for housing purposes. The government has also allowed private participation, including foreign direct investment, in the housing sector to meet the growing demand for housing in metropolitan and other urban areas.

The following is a current estimate of the architectural, construction and engineering services required for India's shares of the public sector market:

	%
Airports, roads and railroads	40
Civil structures including soil, foundation	25
Urban planning	15
Commercial buildings	10
Ports and harbors	5
Miscellaneous	5

The most successful companies in the business of architectural, construction and engineering services excel at providing a "total solution" to their clients. Very often, this means creating a consortium to perform and bid for a contract. Typically, partners in the consortium consist of consulting, design and engineering, construction and operations and maintenance firms. Successful winners of government contracts are able to convince the buying/executing agency of their ability to financially close the project. The consortium or bidder who arrange the most competitive financing is usually awarded the bid.

Best Prospects

The Indian market offers the following best prospects for supply of architectural equipment and services:

Surveying and drafting instruments and appliances HS 901540, 901730 Architectural design tools
Architectural and modeling software
Engineering consulting services
Construction management and supervision services

Key Suppliers

Major domestic companies in the Indian market for architectural equipment and services include: Larsen & Toubro; Indian Railway Construction Company; U.P. State Bridge Corporation; Hindustan Construction Company; Projects & Equipment Corporation of India; Tata Consulting Engineers; Rail India Technical & Economic Services; Humphreys & Glasgow; Dalal Consultants & Engineers; Development Consultants; Consulting Engineering Services; Gammon India Ltd; Engineers India Ltd.; and WAPCOS.

Leading U.S. companies in the architectural and engineering services field that are operating in India include: Hellmuth, Obata & Kassabaum; Skidmore Owings & Merrill; Development Design Group; Louis Berger; Sverdrup Civil; Bechtel; Fluor Daniel; M.W. Kellogg; Black & Veatch; Hagler Bailly; Brown & Root; Harza Engineering; International Resources Group; The Caorradion Group; and K&M Engineering.

European suppliers, especially those from the U.K. and Germany, have been active in India's metallurgical, power, railway and ports industries. The Japanese (through Mitsui, Marubeni and Toyo Engineering), and the Koreans (principally through Daewoo and Hyundai) have also been active in the industrial construction sector.

Prospective Buyers

The government is the largest end-user for contracts that require inputs of architectural equipment and services. Faced with inadequate resources, it is inviting increasing participation from the private sector across several infrastructure sectors to meet increased demand.

The Ministry of Surface Transport is responsible for operating India's 11 major ports, the majority of which require better cargo berths, improved handling facilities and increased mechanization. The Ministry also seeks private sector investment of USD 1.9 billion to augment ports capacity to 450 million tons by 2006. Several new green field port projects are planned, and some private ports are already up and running. The same Ministry is responsible for India's road network of 3 million kilometers. An estimated USD 33.7 in investment is required to improve and augment the network over the next six years.

India's Ministry of Civil Aviation is responsible for operating all of India's airports and the government-owned Indian Airlines carries approximately 60 percent of all domestic traffic. The Ministry has plans to invest USD 788 million over the next 5 years to upgrade India's civil aviation infrastructure and modernize airspace management. The Airports Authority of India expects the private sector to invest USD 164 million in the airport sector through build-operate-transfer (BOT) projects.

The Ministry of Urban Development estimates that investment of more than USD 80 billion is required by 2005 to improve basic urban amenities and facilities.

Market Entry

Large end-users such as government agencies and private sector companies generally invite bids for infrastructure projects. Due to increasing competition and the need for bankable project proposals, the preferred route for U.S. firms to enter the Indian market is through local partnerships rather than attempting

to market their services directly to the end-users. Direct sales of certain architectural construction and engineering services require significant interface at the initial and on-going stage of the project that require collaborative relationships with agents, distributors, manufacturers and contractors in India.

In the procurement of architectural equipment and services for public construction works, several steps exist from planning to completion. After approval or authorization of a project plan from the government agencies, bidding procedures are publicized through local daily newspapers and official news briefs. U.S. firms interested in these projects should be aware that without a capable local partner, it is difficult to meet the all requirements, which include technology transfers in architectural and engineering services. Many foreign firms prefer to work with Indian firms as a partner in a single organization, for example, in a consortium or by acting as consultants to Indian firms.

Other private sector business deals for architectural equipment and services in India are generally negotiated through ongoing communication with end-users on an individual basis. This requires strong local representation to call on potential customers for providing information about the company's capabilities, as well as to maintain strong relationships with potential customers. Prime contractors usually award contracts for architectural equipment and services based on constant negotiation of information on the terms and conditions for the contract, including the technologies to be employed. Many times, these negotiations follow the technical presentations made to working level staff at the contract and engineering departments of the prime contractor.

Market Issues & Obstacles

It is not unusual for negotiations to drag on for years and be held up at more than one of the sundry levels within the Indian bureaucracy for long periods with no discernible movement or reason given for lack of progress. With this in mind some firms identify local representatives who are familiar with the culture and customs of India as well as familiar with how to expedite their products or services through the maze of bureaucracy in many Government ministries.

Trade Events

ACE Tech 2006, organized by The Economic Times, will be held at the Bombay Exhibition Center, Goregaon (E), Mumbai, November 2-5, 2006. The focus of this exhibition will be construction machinery & Equipment, Building Materials & Components, Construction Technologies, Engineering & Automation, etc. For further details please visit the show's website: http://www.atacetech.com.

Interbuild India, organized by Inter Ads Limited, will be held at the Pragati Maidan, New Delhi between October 26 and 28, 2006. Please visit show's website: http://www.interbuild-india.com

Resources & Key Contacts

Practicing Engineers, Architects and Town Planners Association – www.peataindia.org
Confederation of Construction Products and Services - www.ccpsindia.com/
Indian Building Congress – www.indianbuildingscongress.org
National Institute of Construction Management & Research – www.nicmar.org

Consulting Engineers Association of India – www.ceaindia.org
Construction Federation of India - www.cfionline.org
Indian Association of Structural Engineering - www.iastructe.org

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